

## REMARKS

This is intended as a full and complete response to the Final Office Action dated May 26, 2010. Please reconsider the claims pending in the application for reasons discussed below.

### Claim Rejections Under 35 U.S.C. § 112

Claims 36, 40, and 41 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In response, Applicant has amended claims 36, 40, and 41 accordingly. Therefore, Applicant respectfully requests the § 112 rejection be removed.

### Claim Rejections Under 35 U.S.C. § 101

Claims 36 and 39 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. In response, Applicant has amended claims 36 and 39 accordingly. Therefore, Applicant respectfully requests the § 101 rejection be removed.

### Claim Rejections Under 35 U.S.C. § 103

Claims 1-8, 10-24, 26-36, and 40-47 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Ehlers, et al.* (U.S. 5,572,438) in view of *Whyte, et al.* (U.S. 4,199,761) and further in view of Applicant Admission and NRSC, Setting Standards for the Future of Radio.

### **Background – Understanding of Ehlers et al. (US 5,572,438)**

The following discussion regarding obviousness vs. non-obviousness will lend itself on an established methodology which is supported by court decisions. A brief discussion regarding the most relevant prior art will, however, first be presented as the understanding of the present invention must be seen in its correct context, hence it will be helpful to take a closer look at the features of US Patent 5,572,438 by Ehlers et.al.,

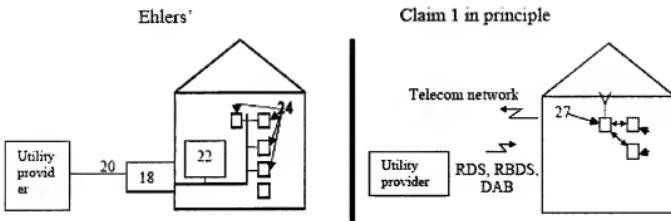
hereinafter referred to as Ehlers. In the following reference in parenthesis refers to Ehlers' unless otherwise explicitly indicated.

Ehlers represented state of the art at the date of the filing within the area of Energy Management and Building Automation System (title). The system according to Ehlers comprises at customer premises an external unit, CPEU (col. 8 lines 16), which includes a communications interface unit 16 and a first microcomputer 18; a local area network communications medium 20 in the form of a power line carrier bus; a second microcomputer 22; a plurality of load sensing and/or load control modules 24 and one or more condition detectors 26 (col. 8 lines 16 – 22). The two microcomputers may, for example, both be IBM-compatible personal computers running a version of 50 the DOS operating system of IBM or Microsoft on an Intel x86 family processor, PowerPC family microprocessor, or equivalent. In an exemplary embodiment, it is contemplated that the first microcomputer will employ as a processor a Power PC 403 GA embedded controller from International Business Machines Corporation of Armonk, N.Y. and Research Triangle Park, N.C. (IBM) and that the second microcomputer will employ any Intel x86 family processor or equivalent (col. 8 lines 48 – 58). However, the use of an industry-standard microcomputer architecture has the advantage of reducing costs and making readily available a variety of input/output accessories such as modems, routers, brouters and other communications products (col. 9 lines 1 – 4). In column 9, it is further disclosed that the input-output devices 18-C include at least one device for communicating with the utility company and one device for communicating with the second microcomputer and the load control modules and one device for interrogating the watt-hour meter. If power-line carrier technology is used to perform all of these communications, it may be possible to use a single I/O device 18-C; otherwise, a separate I/O device may be needed for one or more of these communications services. Connectors may be provided on one of the busses 18-D, for example, to receive plug-in circuit cards for I/O devices. The bus and connectors preferably will conform to an industry standard interface such as the ISA or PCMCIA standards. For example, an ISA radiofrequency network interface (including a transceiver and control logic) card may be plugged into one connector 18-F1 for use in communicating between the system and the utility company, while a CEBus interface node (i.e., transceiver and control logic) may

be plugged into another connector 18-F2 for use in communicating between the first microcomputer and the load control modules (col. 9 lines 13 – 33). The second micro computer 22, which is described in detail in column 9 with reference to figure 3, includes a microprocessor, a memory, a user-interactable I/O subsystem, and a further I/O subsystem or device 22-C all communicating via one or more internal buses 22-D. To summarize, the management system at the customer premises includes a first microcomputer which communicates with a utility provider that is, being the interface to the utility provider, the first microcomputer also includes means for communicating with a second microcomputer and communication interfaces for communicating with load control modules. The second microcomputers' main object is to provide interface means to the end users. The system according to Ehlers includes consequently on a superior level a hierarchical level of devices, first and second computers and load sensing means. In contrast to this the invention according to claim 1 provides a system in which there are provided specialized boxes at end-users premises, these boxes provides the interface between both end-users and the utility provider. Thus, Ehlers' and the present invention are fundamentally different on a device level.

The interface and communication between elements of the system also differs fundamentally, which also appears from the examination report issued by the Examiner. Finally the decision taking according to the present invention differs from the one in Ehlers with respect to turning devices on and off.

By illustration, the system for management according to Ehlers' appears as below to the left, whereas a system for management of non-durables according to the present invention as defined by claim 1 and 20 will appear as below to the right.



#### Obviousness – nonobviousness test

The Supreme Court in *KSR International Co. v. Teleflex Inc. (KSR)*, 550 U.S. \_\_\_, 82 USPQ2d 1385 (2007) reaffirmed the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 as stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Obviousness is a question of law based on underlying factual inquiries. The factual inquiries enunciated by the Court are the following factors:

- (A) Ascertaining the scope and content of the prior art; and
- (B) Ascertaining the differences between the claimed invention and the prior art; and
- (C) Resolving the level of ordinary skill in the pertinent art.

The court in *Graham*, then went on to consider what it called "secondary considerations", these considerations include commercial success long felt but unsolved needs, failure of others, etc. Such secondary considerations may be indicia in favor or disfavor of non-obviousness.

The first part of the *Graham* analysis therefore requires looking at the *Graham* factors set out to determine whether there is *prima facie* obviousness. If there is, then one can look to the secondary considerations to see whether this *prima facie* case has been successfully rebutted.

### **The Relevant Prior Art**

The first and second *Graham* factors relate to prior art. The first factual question to be answered therefore is what is the relevant prior art? From a legal point of view anything that falls within any of subsections (a), (b), (e), (f) or (g) of 35 USC 102 is potentially relevant prior art. The factual issue, however, is whether the art in question is something that would be considered relevant by one skilled in the art.

### **The Person Having Ordinary Skill in the Art**

The third *Graham* factor relates to the level of ordinary skill in the prior art. As such, there is a need to establish what is the skill of the ordinary person skilled in the art in question. This has resulted in courts taking care to define the level of education that they believe to be appropriate of the skilled person in different areas of technology. The Federal Circuit has indicated that the following factors are useful in determining the appropriate skill level to use: the type of problems encountered in the art; prior art solutions to those problems; rapidity with which inventions are made; sophistication of the technology; and educational level of active workers in the field. The type of problems encountered within energy management is varying dependent on the level of abstraction. Analyses related to identification of energy needs on a future basis clearly indicates that the person skilled in the art, must have qualifications above high school level and have the ability to perform mathematical modeling, whereas the person facing the problem of measuring consumption of non-durables and establishing communications links to do so on a remote basis is likely to be an average practitioner within his field of art. He does not need skills on a high mathematical level. In Ehlers' it is generally indicated that standard equipment which adhere to established industry standards shall be utilized. Hence, the applicant is of the opinion that the person having ordinary skill in the art is an average practitioner having knowledge of circuit and control arrangements or systems for supplying or distributing non-durables between a multi utility provider and customers, and also data processing or calculating computer apparatuses designed for use within such arrangements and systems, the definitions are partly from U.S. Cl. 700/276 and from IPC H02J 3/00, which is within the area searched by the Examiner and by the International Search Authority.

"The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry." *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718, 21 USPQ2d 1053, 1057 (Fed. Cir. 1991). The Examiner must ascertain what would have been obvious to one of ordinary skill in the art at the time the invention was made, and not to the inventor, a judge, a layman, those skilled in remote arts, or to geniuses in the art at hand. *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 218 USPQ 865 (Fed. Cir. 1983), cert. denied, 464 U.S. 1043 (1984).

#### **Scope and Content of the Prior Art Defined by Ehlers'**

With the guidelines above in mind, the following discussion aims to define the scope and content of the prior art defined by Ehlers'. Differences between prior art and the claims at issue are to be ascertained, thus to further indicate non obviousness with respect to the claims previously presented a feature by feature discussion is given below, following the Examiners' approach.

*"Ehlers teaches a method for automatic management of demand for nondurables, said method comprising:*

*Claims 1, 20, 34, 36, 40-42,*

*providing at End-users' premises specialized electronic boxes (C. 8, L. 12-18; C. 9, L. 42),*

The Examiner indicates that according to Ehlers there is provided specialized boxes at the End-users' premises, these boxes are according to the Examiner described in C. 8, L. 12-18; C. 9, L. 42. The "boxes" presented in the referred text portions are: customer premises external unit, CPEU, 12; communication interface unit 16; first microcomputer 18; local area network communication medium 20 and further in line 42 of column 9 the first microcomputer is contained in a waterproof and weather tight housing on or immediately adjacent to the customer premises. It shall be noted that according to Ehlers' the system at least also includes a second microcomputer, a plurality of load sensing, and/or load control modules 24, and one or more condition detectors.

*having microprocessor capability for performing the following functions:*

*receiving broadcast control signals from a Multi Utility provider (C. 25, L. 9-10, 16-17).* The person skilled in the art is faced with the problem of choosing which of the "Boxes" of Ehlers' indicated above that are operable to receive a broadcast signal from the Multi utility provider. According to the Examiner, the chosen "Box" is the first microcomputer (col. 25 lines 9-10, 16, 17); this is readily understood from the content of the referred column (25). The relevant text in Ehlers' reads:

As previously illustrated, the first microcomputer preferably is equipped with the capability of having one or more communications subsystems. Preferably this capability is achieved by equipping the first microcomputer with an industry standard bus and a variety of sockets on the bus for receiving therein circuit boards, cards or other modules. The bus may, for example, conform to the ISA, PCI, PCMCIA or other standard specification. The communications subsystems which can then be installed would include any communications device conforming to the standard. Thus, among the potential communications subsystems would be modems (wired or wireless), RF transceivers, fiberoptic data communications links, and packet transceivers (e.g., for use over the telephone system), to name a few possibilities. Other communications devices can be added readily, as they become available. Moreover, several communications boards and cards can be installed in a customer's system. In addition to allowing the system to communicate with others via these boards and cards, the communications services can cross-communicate with each other through the customer's microcomputer, if it is suitably programmed.

#### Load Shedding

To shed a load, all that is necessary is to broadcast a command for a device at a specific address to turn off or for all devices of a particular priority level or levels or type to turn off. Since the system possesses distributed intelligence in the form of a programmable microcontroller in each load control module, the controller can determine whether its

associated load meets the criteria established in the message and, if so, turn off the load. To turn on all shed loads, a predetermined message can be broadcast over the network.

Thus, the specialized electronic boxes, according to Ehlers', are the first microcomputer, which according to Ehlers', preferably is an industry standard computer (col. 8 lines 47 – col. 9 lines 5). The question then is whether the first computer has the capability of receiving broadcast signals. According to Ehlers', the first computer may be provided with circuit boards such as modems (wired or wireless), RF transceivers, etc. Hence the first computer may be provided with the capability of receiving broadcast signals. The applicant respectfully disagrees with the Examiner that the first computer can be interpreted as a specialized box in accordance to the present invention. This is in particular emphasized throughout Ehlers' as it is preferable to use industry standard microcomputer. None of the other "boxes" according to Ehlers' satisfies the two first features according to claim 1 recited by the Examiner.

*End-users' programming said boxes by setting parameter values in accordance with End-users' priorities (C. 10, L. 28-30),* Ehlers' does not teach programming said boxes by setting parameter values in accordance with End-users' priorities, rather as recited in column 10 the second microcomputer permits the customer to schedule timed turn-on/turn-off events and transmits those events to the CPEU\_PGM program for execution. The applicant respectfully disagrees with the Examiner in that programming the second computer, which is not the specialized box as it does not fulfill all the other criteria for such a box, can be interpreted as "programming said boxes".

*broadcasting from a Multi Utility provider a control signal to be received by said boxes (C. 12, L. 17-18),* the applicant agrees with the Examiner in that the utility provider has the capability of broadcasting control signals, broadcasting according to Ehlers', to the first computer.

*said boxes taking automatic turn-off or turn-on action for some non-durable consuming apparatuses in accordance with stored control algorithms, parameter values set by said End-users and information provided by said control signal (C. 13, L. 41-59);* in the referenced column Ehlers' discloses that the "system" maintains data structures such as meter readings etc. There is no mention in the referred section that the first

computer takes automatic turn-off or turn-on action for some non-durable consuming apparatuses. It is, however, as indicated above, disclosed that the second microcomputer, which is not a specialized box, permits the customer to schedule timed turn on and turn off actions. This is however analogues to the functioning of timers and cannot be interpreted as automatic turn-off turn-on action in the meaning of claim 1. Furthermore the turn-on turn-off action, according to claim 1, is governed by a combination of requirements: stored algorithms, parameter values set by End users', and information provided by the control signal. The applicant respectfully disagrees with the Examiner in that said boxes taking automatic turn-off or turn-on action for some non-durable consuming apparatuses in accordance with stored control algorithms, parameter values set by said End-users and information provided by said control signal, is disclosed in Ehlers.

*wherein said electronic boxes comprising a metering gateway transmitting back to said Multi Utility provider, through a telephone or mobile telephone network, instant or semi-instant non-durable consumption values measured at said End-users' premises by*

*said electronic boxes* (C. 15, L. 3-13), there is no indication in Ehlers' that the first computer comprises a metering gateway, rather as disclosed in the referred section the first computer can interrogate watt hour meters. This watt-hour meter shall not be confused with a metering gateway comprised in said specialized electronic boxes according to claim 1. The first computer does not include any metering gateway. The applicant does, however, agree with the Examiner in the fact that the first computer can transmit back to a utility provider through a telephone system. However, the data transmitted by the first computer is not consumption values measured at the end users' premises by said electronic boxes, rather the consumption values are read by a plurality of load sensing and/or load control modules 24 (col. 8 lines 21-22). The applicant respectfully disagrees with the Examiner in that; *said electronic boxes comprising a metering gateway transmitting back to said Multi Utility provider, through a telephone or mobile telephone network, instant or semi-instant non-durable consumption values measured at said End-users' premises by said electronic boxes, is disclosed in Ehlers'.*

To summarize: the applicant respectfully disagrees with the examiner in that the following features are disclosed in Ehlers':

- *providing at End-users' premises specialized electronic boxes, the first computer is not a specialized box.*
- *having microprocessor capability for performing the following functions: receiving broadcast control signals from a Multi Utility provider, if there is no specialized box present in Ehlers' it is meaningless to talk about the capability of non-existent devices.*
- *End-users' programming said boxes by setting parameter values in accordance with End-users' priorities, the second microcomputer is not the specialized box and it does consequently not provide the functions of the specialized boxes according to claim 1.*
- *said boxes taking automatic turn-off or turn-on action for some non-durable consuming apparatuses in accordance with stored control algorithms, parameter values set by said End-users and information provided by said control signal wherein said electronic boxes comprising a metering gateway transmitting back to said Multi Utility provider, through a telephone or mobile telephone network, instant or semi-instant non-durable consumption values measured at said End-users' premises by said electronic boxes.*

### Assessment of Amended Claim 1

The features discussed above do not include all features as disclosed by the pending claim 1. However, to further distinguish claim 1 from prior art according to Ehlers and to further make the claim clearer, an amended claim 1 is filed which reads:

A method for automatic management of demand for non-durables, utilizing asymmetric downstream and upstream communication between a Multi Utility provider and End-users said method comprising:

- a) providing at End-users' premises distributed intelligent home gateways having microprocessor capability for performing the following functions: receiving radio broadcast control signals by a RDS, RBDS OR DAB radio receiver comprised in said distributed intelligent home gateways at the End-users' premises from a Multi Utility provider;
- b) determining whether information contained in said broadcast control signals, stored algorithms and End-user adjustable parameter value settings, utilizing said distributed intelligent home gateways, satisfies a condition for any End-user non-durable consuming apparatuses connected to a network delivering said non durables to be switched on or off, if information contained in said broadcast control signals, stored algorithms and End-user adjustable parameter value settings, utilizing said distributed intelligent home gateways, satisfies a condition for any End-user non-durable consuming apparatuses connected to a network delivering said non durables to be switched on, then turn connected non-durable consuming apparatuses on by

utilizing switching means in said distributed intelligent home gateways,  
if information contained in said broadcast control signals, stored algorithms and End-user adjustable parameter value settings,  
utilizing said distributed intelligent home gateways, satisfies a condition for any End-user non-durable consuming apparatuses connected to a network delivering said non durables to be switched off, then turn connected non-durable consuming apparatuses off by utilizing switching means in said distributed intelligent home gateways,

- c) End-users programming said distributed intelligent home gateways by setting parameter values in accordance with End-users' priorities;
- d) transmitting from the Multi Utility provider at least one radio broadcast control signal which radio broadcast control signal is received by said radio receiver in all said distributed intelligent home gateways;  
wherein said Multi Utility provider broadcasts the control signal via at least one radio broadcasting station utilizing any one of the RDS, RBDS and DAB systems;
- e) said distributed intelligent home gateways taking automatic turn-off or turn-on action for some non-durable consuming apparatuses connected to said network in accordance with stored control algorithms, the parameter values set by said End-users and information provided by said control signal, and wherein
- f) said distributed intelligent home gateways comprising a metering point gateway transmitting back to said Multi Utility provider, through a telephone or mobile telephone network, instant or semi-instant non-durable consumption values measured at said End-users' premises by said distributed intelligent home gateways.

The remaining features, that is, the features from claim 1 that has not been subject to any discussion must be analyzed so as to ascertain all distinguishing features between Ehlers' and the amended claim 1.

*A method for automatic management of demand for non-durables, utilizing asymmetric downstream and upstream communication between a Multi Utility provider and End-users said method comprising:*

Ehlers' does not teach this feature in one single embodiment; however, Ehlers' indicates that the first micro computer can be provided with a variety of communication means. However, it is not explicitly indicated that the first microcomputer utilizes asymmetric communication. The applicant respectfully asserts that this feature is novel over Ehlers'.

a) providing at End-users' premises distributed intelligent home gateways having microprocessor capability for performing the following functions: receiving radio broadcast control signals by a RDS, RBDS or DAB radio receiver comprised in said distributed intelligent home gateways at the End-users' premises from a Multi Utility provider;

The specialized electronic boxes have been substituted by intelligent home gateways as this wording is more precise and it is consistent with the wording of the description. In the view of the Applicant, "intelligent home gateways" also distinguishes claim 1 further in view of Ehlers'. Also it has been added that the intelligent home gateways comprises one of a RDS, RBDS, or DAB radio receiver. There is no mentioning of any intelligent home gateways comprising a RDS, RBDS or DAB radio receiver in Ehlers, thus the applicant respectfully asserts that this feature is novel over Ehlers'.

b) determining whether information contained in said broadcast control signals, stored algorithms and End-user adjustable parameter value settings, utilizing said distributed intelligent home gateways, satisfies a condition for any End-user non-durable consuming apparatuses connected to a network delivering said non durables to be switched on or off;

if information contained in said broadcast control signals, stored algorithms and End-user adjustable parameter value settings, utilizing said distributed intelligent home gateways, satisfies a condition for any End-user non-durable consuming apparatuses connected to a network delivering said non durables to be switched on, then turn connected non-durable consuming apparatuses on by utilizing switching means in said distributed intelligent home gateways,

if information contained in said broadcast control signals, stored algorithms and End-user adjustable parameter value settings, utilizing said distributed intelligent home gateways, satisfies a condition for any End-user non-durable consuming apparatuses connected to a network delivering said non durables to be switched off, then turn connected non-durable consuming apparatuses off by utilizing switching means in said distributed intelligent home gateways,

This feature has been amended so as to make it clearer; however, no substantial change of the meaning is added. The applicant agrees with the Examiner in that Ehlers' does not teach this feature; hence feature b is novel in light of Ehlers'.

The feature indicated as c) was discussed above; hence the same reasoning applies mutatis mutandis. Thus the applicant respectfully asserts that this feature is novel over Ehlers'.

d) transmitting from the Multi Utility provider at least one radio broadcast control signal which radio broadcast control signal is received by said radio receiver in all said distributed intelligent home gateways;  
wherein said Multi Utility provider broadcasts the control signal via at least one radio broadcasting station utilizing any one of the RDS, RBDS, and DAB systems;

There are several distinguishing features recited in d), the Multi Utility provider according to Ehlers' does not preferably transmit radio broadcast signals. Furthermore the optional broadcasting according to Ehlers' will not be received by all first computers, as this broadcast signal does not cover an area in the same way as the broadcast signal according to claim 1, which may very well be received by all distributed intelligent home gateways in a whole country or state. Still further there is no mentioning of any RDS, RBDS, and DAB systems in Ehlers'; hence the applicant respectfully asserts that the features indicated as d) are novel over Ehlers'.

The feature indicated as e) was discussed above; hence the same reasoning applies mutatis mutandis independently of the minor amendments which are introduced to make the claim readily understandable, and hence the applicant respectfully asserts that also this feature is novel over Ehlers'.

The feature indicated as f) was discussed above; hence the same reasoning applies mutatis mutandis independently of the minor amendments which are introduced to make the claim readily understandable. Hence the applicant respectfully asserts that also this feature is novel over Ehlers'.

#### **Assessing the Prior Art by the Person Having Ordinary Skill in the Art**

Having addressed the differences between Ehlers' and the present invention as disclosed by the amended claim 1, the question is whether the person having ordinary skill in the art would make the combinations alleged by the Examiner to produce the claimed invention.

1. As indicated above, to avoid any hindsight one must assume that the person having ordinary skill in the art is unaware of the claimed invention and he must find motivation from the prior art at the date of filing to arrive at the claimed invention. Now, starting with the first feature of claim 1, is there any motivation for the person having ordinary skill in the art to modify Ehlers' so as to provide "A method for automatic management of demand for non-durables, utilizing asymmetric downstream and upstream communication between a Multi Utility provider and End-users"? Ehlers' discloses an energy management and building automation system. The person having ordinary skill in the art as defined above will not find any teaching, or motivation in Ehlers which points in the direction of providing an asymmetric system. He will find the motivation to test out numerous wired and wireless communication systems within the known standards; however, in the opinion of the Applicant he is not likely to test out combinations that are asymmetric. It is not sufficient to show that the prior art could have been modified to produce the claimed invention unless the prior art suggested the modification (*In re Gordon* 221 USPQ 1125 (Fed Cir, 1984)).

The applicant respectfully asserts that the person having ordinary skill in the art would not modify Ehlers' so as to include asymmetric communications means.

2. Is there any motivation for the person having ordinary skill in the art to modify Ehlers' so as to "providing at End-users' premises distributed intelligent home gateways having microprocessor capability for performing the following functions: receiving radio broadcast control signals by a RDS, RBDS or DAB radio receiver comprised in said distributed intelligent home gateways at the End-users' premises from a Multi Utility provider"? In accordance to Ehlers', the first computer is preferably a standard computer. It is emphasized that using standard components is preferable; hence the person having ordinary skill in the art would not be motivated to provide distributed intelligent home gateways with a RDS, RBDS, or DAB radio receiver. There is no pointers or motivation in Ehlers' that will motivate the person having ordinary skill in the art to make the two necessary modifications, namely replace the standard computer with a more specialized device which does not adhere to any ISA standard,

and thereafter seek in prior art to find a solution that can provide data transfer utilizing a radio broadcast signal and then provide the home gateway with a RDS, RBDS, or DAB receiver. It is, as the Examiner points out, an RBDS standard that provides the capability of carrying data. However in the view of the Applicant, the person having ordinary skill in the art would not be motivated to combine Ehlers' with a solution according to NRSC U.S. RBDS Standard, as the references must be considered as a whole and must suggest the desirability and, thus, the obviousness of making the combination.

The applicant respectfully asserts that the person having ordinary skill in the art would not modify Ehlers' and include solutions from NRSC U.S. RBDS Standard.

3. Is there any motivation for the person having ordinary skill in the art to modify Ehlers' so as to; "determining whether information contained in said broadcast control signals, stored algorithms and End-user adjustable parameter value settings, utilizing said distributed intelligent home gateways, satisfies a condition for any End-user non-durable consuming apparatuses connected to a network delivering said non durables to be switched on or off;

if information contained in said broadcast control signals, stored algorithms and End-user adjustable parameter value settings, utilizing said distributed intelligent home gateways, satisfies a condition for any End-user non-durable consuming apparatuses connected to a network delivering said non durables to be switched on, then, turn connected non-durable consuming apparatuses on by utilizing switching means in said distributed intelligent home gateways,

if information contained in said broadcast control signals, stored algorithms and End-user adjustable parameter value settings, utilizing said distributed intelligent home gateways, satisfies a condition for any End-user non-durable consuming apparatuses connected to a network delivering said non durables to be switched off, then, turn connected non-durable consuming apparatuses off by utilizing switching means in said distributed intelligent home gateways".

According to Ehlers', the Multi Utility Provider can broadcast a command for a device at a specific address to turn off or for all devices of a particular priority level or levels or type to turn off. Since the system possesses distributed intelligence in the form of a programmable microcontroller in each load control module, the controller can determine whether its associated load meets the criteria established in the message and, if so, turn off the load (col. 25 lines 9 – 16). In the claimed invention, the decision is taken by the distributed intelligent home gateways not in a programmable microcontroller in each load. Hence Ehlers' teaches that the Multi Utility Provider can broadcast control signals, but in this context Ehlers' does not teach that the first computer determines whether its associated load meets the criteria established in the message and, if so, turn off the load. As to the referred use of status flags, according to Ehlers', these status flags indicate the shed status of a device. That is the status flags merely indicate an on or off status in compliance with a shedding status, and the status flags are distributed to devices. According to the present invention, decision making is based on three parameters: namely the content of a RDS, RBDS, or DAB radio signal broadcasted from a utility provider, algorithms stored in the intelligent home gateway, and user defined value settings. Turning on or off devices is based on these three parameters and the switching on or off is effectuated utilizing switching means in the distributed intelligent home gateway. The status flags, according to Ehlers, are indicators and they shall not be confused with parameters of the kind indicated above.

In Applicants' view there is no motivation to the person skilled in the art to redesign Ehlers' so as to include all three parameters mentioned above for decision taking, accordingly the applicant respectfully asserts that the person having ordinary skill in the art would not modify Ehlers' so as to include the features indicated as item b of claim 1.

4. Is there any motivation for the person having ordinary skill in the art to modify Ehlers' so as to let "End-users programming said distributed intelligent home gateways by setting parameter values in accordance with End-users' priorities;"? With reference to the previous discussion, the End users must find motivation in Ehlers' to redesign the

system according to Ehlers' so that Ehlers' does not include a first computer and a second computer, where the second computer is the user interface. Hence the person skilled in the art must physically move the first computer in house, thereafter reconfigure the first computer so as to include a user interface such as USER\_PGM from the second computer. To sum up, the first computer must be configured to include all of the capabilities of the second computer in addition to be placed inside end users premises.

The applicant respectfully asserts that the person having ordinary skill in the art would not find any motivation to modify Ehlers' so as to let End-users programming said distributed intelligent home gateways by setting parameter values in accordance with End-users' priorities.

5. Is there any motivation for the person having ordinary skill in the art to modify Ehlers' so that a Utility provider transmits "at least one radio broadcast control signal which radio broadcast control signal is received by said radio receiver in all said distributed intelligent home gateways; wherein said Multi Utility provider broadcasts the control signal via at least one radio broadcasting station utilizing any one of the RDS, RBDS and DAB systems"? Reference is made to the discussion above related to inclusion of one of RDS, RBDS, and DAB signaling. Moreover, to modify Ehlers' to include this feature can obviously only be found reasonable if the receiving side also is modified. Hence the person skilled in the art needs to make to modifications, namely as stated in item 2 include RDS, RBDS, and DAB receivers in distributed home gateways and thereafter configure the Utility Provider to include RDS, RBDS, and DAB transmitters or to have access to RDS, RBDS, and DAB transmitters.

Whyte et. al. discloses solutions including multichannel radio communication utilizing VHF\_FM, and also the use of tone signals. The question is, if the person having ordinary skill would be motivated to combine Ehlers' with Whyte, as the references must be considered as a whole, and must suggest the desirability, and, thus, the obviousness of making the combination (MPEP 2141.35) in the view of the Applicant. There is nothing in Ehlers' that points in the direction of making such a combination; moreover,

such a combination will not provide a solution according to subject matter. The person skilled in the art is further faced with the problem of providing signals that provides richer information than tone signals. Thus, why should the person skilled in the art find motivation to take a "two step" approach for providing RDS, RBDS, and DAB transmitters, namely first use the teaching from Whyte, and thereafter modify this teaching according to NRSC U.S. RBDS Standard?

The applicant respectfully asserts that the person having ordinary skill in the art would not modify Ehlers' and include solutions from NRSC U.S. RBDS Standard.

6. Is there any motivation for the person having ordinary skill in the art to modify Ehlers' so that "said distributed intelligent home gateways taking automatic turn-off or turn-on action for some non-durable consuming apparatuses connected to said network in accordance with stored control algorithms, the parameter values set by said End-users and information provided by said control signal"? The distinguishing features regarding this feature were discussed above. There is no motivation in Ehlers' that points in the direction of making all necessary modifications indicated in the section discussing "Scope and Content of the Prior Art Defined by Ehlers'. Furthermore, reference is also made to item 3 above.

The applicant respectfully asserts that the person having ordinary skill in the art would not modify Ehlers' so as to include the features indicated as item e of claim 1.

7. Is there any motivation for the person having ordinary skill in the art to modify Ehlers' so that "said distributed intelligent home gateways comprising a metering point gateway transmitting back to said Multi Utility provider, through a telephone or mobile telephone network, instant or semi-instant non-durable consumption values measured at said End-users' premises by said distributed intelligent home gateways"? Reference is made to the section above titled "Scope and Content of the Prior Art Defined by Ehlers"? There is no indicators or pointers in Ehlers' in the direction of modifying the

first computer to include a metering point gateway, rather it is disclosed how the first computer interrogates watt hour meters.

The applicant respectfully asserts that the person having ordinary skill in the art would not modify Ehlers' so as to include the features indicated as item f of claim 1.

If the new amended claim 1 is non-obvious over Ehlers' in view of cited documents then claim 1-8, 10- 19, and 43-44 must be patentable in light of being dependent claims.

The same reasoning as set forth above applies mutatis mutandis with respect to claim 20 and 34; hence no further discussion regarding patentability with respect to these claims will be necessary. Furthermore in light of its dependency to preceding claims claim 21-33, 35, and 45 – 47 must be allowable for the same reasons.

#### Claim 36

The amended claim reads:

A device configured to generate and send a RDS RBDS or DAB radio broadcast control signal with capability of carrying data for providing operator information from a Multi Utility provider to distributed intelligent home gateways at End-users' premises wherein said Multi Utility provider broadcasts the radio control signal via at least one radio broadcasting station system, thereby to enable automatic management of demand for non-durables provided by a Multi Utility provider, said radio broadcast signal containing at least one of pricing information and rationing information regarding amount of consumption reduction.

In light of the discussion above, it is obvious that subject matter according to claim 36 is novel. The question is whether the person having ordinary skill in the art would modify Ehlers' so as to arrive at subject matter of the present invention.

Following the reasoning above, it is the opinion of the applicant that the person skilled in the art would not modify Ehlers' so as to use a RDS, RBDS, or DAB radio broadcast control signal for carrying information from a multi utility provider to distributed intelligent home gateways.

As discussed above, there is no indication towards utilization of digital radio broadcast signals in Ehlers'. Moreover, as indicated above, the person skilled in the art would have to, without any motivation, seek in the literature to find a solution according to Whyte, and thereafter in a second step find motivation in Whyte to include teachings from the NRSC U.S. RBDS Standard.

The applicant respectfully asserts that the person having ordinary skill in the art would not modify Ehlers' so as to arrive at subject matter according to claim 36.

If the new amended claim 36 is non-obvious over Ehlers' in view of cited documents then claim 39 must be the same in light of being dependent claims.

#### Claim 40

The amended claim reads:

A system for automatic management of demand for non-durables, which system comprises:

a Multi Utility provider configured to transmit radio control signals to a plurality of End-users on a radio broadcast channel wherein said Multi Utility provider broadcasts the control signal via at least one radio broadcasting station utilizing any one of the RDS, RBDS and DAB systems;

distributed intelligent home gateways operable to transmit a data communication signal for providing End-user return information to said Multi Utility provider, thereby to enable non-durables delivery control and pricing influenced by demand, said signal containing at least non-durables consumption information and using a signal channel different from said radio broadcast channel.

In light of the discussion above, it is obvious that subject matter according to claim 40 is novel. The question is whether the person having ordinary skill in the art would modify Ehlers' so as to arrive at subject matter.

Following the reasoning above, it is the opinion of the applicant that the person skilled in the art would not modify Ehlers' so as to provide a system for automatic management of demand for non-durables from a utility provider where the utility provider transmits

digital radio broadcast signals via at least one broadcasting station where the signals include return information and where the recipients are distributed intelligent home gateways at end users. This return information will among others enable non-durables delivery control and pricing influenced by demand.

As discussed above, there is no indication towards transmitting of return information to end users' distributed intelligent home gateways in *Ehlers'*. Moreover, as indicated above, the person skilled in the art would have to firstly find motivation in *Ehlers'* which points in the direction or transmitting return information to intelligent home gateways. Such motivation cannot be found either with respect to the return signal or with respect to replace first and second computers with an intelligent home gateway. Thereafter, the person having ordinary skill in the art would have to consult *Whyte*, and thereafter in a second step find motivation in *Whyte* to include teachings from the NRSC U.S. RBDS Standard.

The applicant respectfully asserts that the person having ordinary skill in the art would not modify *Ehlers'* so as to arrive at subject matter according to claim 40.

#### Claim 41

The same reasoning as set forth above applies mutatis mutandis with respect to claim 41 and 42; hence no further discussion regarding patentability with respect to these claims will be necessary.

Claims 25 and 39 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Ehlers*, *Whyte*, Applicant Admission and NRSC and further in view of *Ehlers, et al.* (U.S. 2004/0117330 A1). Applicants respectfully traverse the rejection. Claim 25 depends from claim 20, and claim 39 depends from claim 36. As set forth above, the combination of *Ehlers*, *Whyte*, Applicant Admission and NRSC fails to disclose all the limitations of claims 20 and 36. Further, *Ehlers et al.* fails to cure the deficiencies of the combination of *Ehlers*, *Whyte*, Applicant Admission and NRSC. Therefore, the combination of the combination of *Ehlers*, *Whyte*, Applicant Admission, NRSC and

*Ehlers et al.* fails to disclose all the limitations of claims 25 and 39. Applicant respectfully requests the 103(a) rejection of claims 25 and 39 be removed and allowance of the same.

New Claims

New claims 48-49 have been added to claim aspects of the present invention. Applicant submits that no new subject matter has been added. The applicant respectfully asserts that the person having ordinary skill in the art would not modify Ehlers' so as to arrive at a method for initiating reduction of non durables at end users when an emergency on a grid is detected, initiated by one of; a grid operator, a grid owner or authorities as recited in new claims 48-49. Reference is made to the discussion above; most of the arguments can be reused mutatis mutandis with respect to the new claims. For these reasons, Applicants believe that new claims 48-49 are in condition for allowance and respectfully request the same.

Conclusion

Having addressed all issues set out in the Final Office Action, Applicant respectfully submits that the claims are in condition for allowance and respectfully requests that the claims be allowed.

Respectfully submitted,



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